

Attachment, Emergent Morality, and Aggression: Toward a Developmental Socioemotional Model of Antisocial Behaviour

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Does attachment play a role in the development of moral reasoning and antisocial behaviour? In this contribution we discuss the role of attachment relationships in the development of early precursors of morality and antisocial behaviour, in particular compliance and aggression in infancy and in childhood. Findings are presented on the role of attachment representations in the development of morality, authoritarianism, and criminal behaviour in adolescence and young adulthood. For heuristic purposes, two socioemotional models of the development of mild and serious types of antisocial behaviour are proposed in which attachment is a prominent feature.

In February 1994, Paul Feyerabend—the physicist, philosopher and, by nature, anarchist—died of brain cancer at the age of 70. Some weeks before his death he finished the last chapter of his autobiography, *Killing time*, which was published in 1995. In his autobiography, Feyerabend describes how he survived the depressions and the suicide of his mother, and how he barely survived World War II as an officer in the German army. He was decorated with a couple of Iron Crosses but was also crippled and left impotent for life. He also describes the many battles he fought in the philosophical domain, in particular against his former mentor Karl Popper. The picture to emerge is that of an egotistical person with little emotional reaction to his own distress and that of others. Only during the last decade of

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his life, after becoming deeply attached to a woman, does he seem to return to an emotional life, and to reconnect with his childhood and war experiences.

It is interesting to read what Feyerabend (1995, pp. 174–175) writes about morality as his life is fading away:

I conclude that a moral character cannot be created by argument, 'education', or an act of will . . . Like true love, it is a gift, not an achievement. It depends on accidents such as parental affection, some kind of stability, friendship, and—following therefrom—on a delicate balance between self-confidence and a concern for others. We can create conditions that favor the balance; we cannot create the balance itself . . . But what can we do in an age like ours that has not yet achieved that balance? . . . The answer is obvious: with a few exceptions we shall act in a barbaric way . . . But while continuing our own lives in this manner, we should at least try to give our children a chance. We should offer them love and security, not principles . . .

In this paper I would like to draw attention to the possible relation between children's attachment relationships, their moral development, and their aggressive, antisocial, and criminal behaviour. Following Feyerabend's intuitive insight, I describe evidence that the early beginnings of morality, such as the capacity to have empathic feelings for the distress of another human being or the inclination to comply with parental directions, are closely linked and intertwined with the developing relationship to a primary attachment figure. I will also discuss the role of insecure attachment in the development of moral reasoning and authoritarianism. Finally, I suggest that attachment disorders and disrupted attachment relationships may be at the root of aggressive, antisocial, and delinquent behaviour in childhood, adolescence, and young adulthood. My review will be cursory and speculative in three ways. Concepts will remain rather unspecified, including those of antisocial and criminal behaviour. The findings reported are tentative and in need of replication. I do not pretend to provide an exhaustive overview of the field but rather focus on a few pivotal studies and stress some findings from my own laboratory. My main goal is to raise some issues for further discussion and to present some new heuristic models for the study of the socioemotional component of morality and antisocial behaviour.

At the start, it is important to note that criminal behaviour cannot be reduced to disorders of attachment in childhood. On the contrary, antisocial or criminal behaviour is strongly influenced by social context, by genetic factors, and by age-related determinants. For example, the increase in crime rates in the United Kingdom from about 20 per 1000 inhabitants in 1961 to about 70 per 1000 inhabitants in 1989 runs parallel to the increase in income inequality during the same period (Rutter, 1996). Of course, the remarkable

convergence of crime and income inequality across a period of almost 30 years is not proof of a causal relation. Income inequality may, however, set the stage for dissatisfaction with current life conditions and may serve as a catalyst for attempts to redress the unjustified inequality by means of criminal behaviour.

Antisocial behaviour has been shown to peak during adolescence and to decrease rapidly after about 18 years of age. Moffitt (1993) provides a description of the association between age and crime arrests in the United States which shows that only a small percentage of the children who commit criminal acts during adolescence continue to do so during adulthood. Hard-core, life-course persistent criminals should be separated from children who commit crimes as part of their struggle for independence from parents, and to obtain status among their peers. Adolescence-limited criminality is almost a normative phenomenon that a large majority of adolescents in Western countries display (Moffitt, 1993). In individuals, its absence may be more problematic than its presence.

Antisocial behaviour is not only the outcome of social context, child rearing, or a troubled adolescence, but it is also genetically determined. In monozygotic twins, antisocial behaviour correlates about 0.80, whereas in unrelated siblings the correlation is about 0.35 (Rutter, 1996). The large gap between these correlations indicates rather strong genetic influences apart from child-rearing experiences. It should be noted, however, that the search for an "aggression gene" will probably be fruitless (Brunner, 1996; Brunner, Nelen, Breakefield, Ropers, & van Oost, 1993) because aggression is too complex a form of behaviour to fit the reductionistic One Gene—One Disorder model (OGOD; Plomin, Owen, & McGuffin, 1994). De Waal (1996) experimentally demonstrated how even genetically biased aggressive behaviour in nonhuman primates may be redirected in socially acceptable directions under the influence of a facilitative social context.

Of course, the social, developmental, and genetic nature of antisocial and criminal behaviour should temper our expectations of strong associations with attachment experiences in childhood. My intent is to document the role of attachment in the development of aggressive and antisocial behaviour without suggesting that attachment may provide an exhaustive explanation of this complicated phenomenon.

INFANT ATTACHMENT, EMPATHY, AND COMPLIANCE

In the second year of life, individual differences arise in empathic feelings and in compliance with parental commands (Kagan, 1981; Kagan & Lamb, 1987; Lamb, 1991). Some children barely show empathy and concern when another person is hurt or distressed, whereas other children become very

upset and engaged with this sorrow (see Sagi & Hoffman, 1976, for an example in newborns). Some children readily comply with parental requests and commands, whereas other children are inclined to disobey and to show conflict behaviour. Although the association between compliance and moral internalisation can readily be seen, the link between morality and empathy is somewhat more complicated. Empathy may develop into an important motive for altruistic or prosocial behaviour (Eisenberg, Fabes, Carlo, & Speer, 1993; Spiecker, 1991) if it is based on feelings of sympathy and not just on mirroring the affect displayed (Eisenberg, Fabes, Miller, & Shell, 1990; Fabes, Eisenberg, & Miller, 1990; Hoffman, 1984; Zahn-Waxler, Robinson, & Emde, 1992). Empathic or personal distress may lead to avoidance of altruistic behaviour because it evokes negative feelings.

Three hypotheses may explain early individual differences in emerging internalisation and morality, differences that tend to become stable in the first few years of life. First, genetic differences may play a role. Zahn-Waxler et al. (1992) found some evidence for a genetic basis of empathy. They studied monozygotic and dizygotic twins who were raised in the same family. Monozygotic twins should behave in a more similar way than dizygotic twins when the child-rearing context is about the same. The researchers estimated that genetics explains about 0.30–0.40 (h^2) of the individual differences in empathy. Therefore, room remains for explanations that take the environment into account.

The second hypothesis concerns parental child-rearing strategies, in particular discipline. Hoffman (1984) suggested that if parents create a warm atmosphere and, at the same time, strictly and consistently forbid behaviour that is damaging to others, they pave the way for feelings of empathy in their children. When disciplining a child, it is crucial to make the reasons for the prohibition explicit. This type of discipline is known as induction. Induction is the opposite of what Patterson (1976) described as coercive parenting, the negative reinforcement of aversive child behaviour leading to an escalation of conflict. Several researchers documented the effectiveness of inductive discipline for school-age children (Grusec & Goodnow, 1994a, b; Janssens, Gerris, & Janssen, 1990). In the case of fearful and anxiety-prone toddlers, Kochanska (1995) has shown that parental discipline strategies that diminish fear are the most effective. In this respect, induction and temperament may interact in the development of moral internalisation.

A third explanation for individual differences in early moral internalisation concerns the attachment relationship with parents. Attachment is evident when a child is strongly inclined to seek proximity or contact with a specific person, usually the parent, in situations of anxiety, stress, illness, or fatigue (Bowlby, 1969, 1973, 1975). In his study of 44 juvenile thieves, Bowlby (1944) anticipated the role of attachment in the development of antisocial behaviour, identifying childhood separation

experiences and the affectionless character these experiences induced in young children as important aetiological factors. In ethical and criminological theories, affective ties between children and caregivers have long been considered relevant to the development of prosocial and antisocial behaviour. In his theory of justice, the philosopher Rawls (1971) suggested that the absence of empathic feelings may indicate the lack of affective bonds with parents or other caregivers. A central component of Hirschi's (1969) criminological model, is the contention that insecure attachments between children and parents lead to fragile bonds with teachers and other authority figures, and to a lack of identification with the social and moral order. In fact, Hirschi (1969) asserted that the essence of the internalisation of norms lies in the attachment of the individual to others, although his later work emphasised the pivotal role of lack of self-control (Gottfredson & Hirschi, 1990).

We hypothesise that toddlers with an insecure attachment relationship with their primary caregiver may be less inclined to feel empathic and to internalise parental norms than children with secure relationships. Nonempathic authoritarian control combined with frequent threats and love withdrawal may lead to compulsive compliance and a lack of moral internalisation (Richters & Waters, 1992, Waters, Hay, & Richters, 1986). Responsive parents who react promptly and adequately to the distress and anxiety of their children stimulate a secure bond and at the same time model the use and the necessity of empathy in reciprocally satisfying relationships. Secure children also may be better able to regulate or control negative emotions evoked by another person's pain and distress (Cassidy, 1994). Secure children may be less inclined to repress negative feelings (as anxious-avoidant children do) or to feel overwhelmed by distress (as anxious-ambivalent children), and, therefore, may be able to go beyond merely feeling the negative emotions of another person to try to relieve the other's distress. Hoffman (1984) proposes that finding a balance between self and other may create the possibility of prosocial or altruistic behaviour. Furthermore, a secure attachment may pave the way for a balanced control of negative emotions arising from social interactions with caregivers and peers in which the needs of both parties are taken into account, sometimes at the cost of immediate gratification of one's own needs (Gottfredson & Hirschi, 1990). Finally, secure children may be less inclined to attract parental attention and proximity by displaying conduct problems than insecure children who may feel neglected or rejected by their attachment figure (Greenberg & Speltz, 1988).

The first systematic empirical study of attachment and early moral internalisation was conducted by Stayton, Hogan, and Ainsworth (1971) who, in the famous Baltimore study from which the Strange Situation procedure originated, found an intriguing association between maternal

sensitivity and infant obedience. They observed 25 white middle class families with infants from 9 to 12 months in their homes. Two aspects of the infants' emerging morality were studied: Compliance to mothers' verbal commands, and internalised controls (i.e. self-inhibiting and self-controlling behaviour). Three dimensions of maternal sensitivity to infants' signals were coded: Sensitivity-insensitivity; acceptance-rejection; and co-operation-interference. The three dimensions were highly correlated. The frequency of maternal verbal commands and discipline-oriented physical interventions were also assessed, as was the infants' IQ. Compliance and internalised controls were both strongly associated with maternal sensitivity, but not with verbal or physical discipline. The investigators doubted that either learning theory or psychoanalytic accounts of identification could explain the development of early compliance and moral internalisation. Instead, they emphasised ethological and evolutionary interpretations of attachment and morality as two sides of the same coin. The exploring child was kept in check by the bias to obey and to seek proximity to the protective attachment figure. The affectional tie between parent and infant fosters compliance to parental rules and signals. In many natural environments, compliance with parental signals was biologically advantageous.

Following this pioneering study, Londerville and Main (1981) observed 36 mothers and their 12-month-old children, using the Strange Situation procedure to assess attachment security; 22 infants were judged to be securely attached to their mothers. At age 21 months, children (and mothers) were observed in several test and play sessions. The children's compliance to maternal commands, internalised controls, and co-operation with the examiners were assessed. Secure infants were significantly more compliant and co-operative than the insecure children. Mothers of secure infants appeared to use inductive discipline more than mothers of insecure infants; mothers of secure infants also used gentler physical interventions and warmer tones in giving commands. The child's compliance and co-operation were positively related to the mother's use of inductive and sensitive discipline. In a study of attachment and the acquisition of values, Bretherton, Golby, and Cho (1997) also stress the compatibility of firm limit-setting with sensitive interaction. Londerville and Main (1981) did not differentiate between committed and situational compliance (i.e. between the child's genuine endorsement of parental rules and their obedience enforced by the situation) (Kochanska, 1995; Kochanska, Aksan, & Koenig, 1995). Committed compliance may be considered preliminary moral internalisation, whereas situational compliance is externally motivated. In emphasising internalised behaviour controls, Londerville and Main (1981), seem to stress the importance of committed compliance.

One of the first studies to examine the relation between attachment security and moral internalisation (including committed compliance) was conducted by Kochanska (1995). A sample of 103 families participated in a study of toddlers' temperamental fearfulness/anxiety proneness, attachment security, and parental discipline as pathways to emerging internalisation. It was designed to test Kochanska's (1994) contention that dominant models of internalisation do not take the child's temperament into account. All constructs were measured with multiple behavioural observations of several contexts at home and in the laboratory, and with parental reports. Fearfulness/anxiety was associated with several measures of moral internalisation. Kochanska (1995) also found strong evidence of diverse pathways to internalisation for children with different temperaments. For the fearful/anxious children, gentle maternal discipline that de-emphasised power predicted optimal internalisation. For fearless children, however, security of attachment was associated with internalisation, and gentle discipline that de-emphasised power appeared unimportant. Attachment security and temperament emerged as important, complementary factors in the development of morality. For children prone to anxiety and fearfulness, gentle parental discipline counteracts the fear. For easy-going children the secure bond with parents facilitates moral internalisation. Thus, parental discipline and attachment are alternative pathways to internalisation for children with different temperaments: one capitalising on the regulation of excess anxiety and one building a co-operative attachment relationship between the mother and child.

Denham (1994) studied the differential reactions of middle class toddlers (mean age 44 months) to mothers' simulated displays of sadness and anger. Children's emotional and behavioural reactions were observed and coded for prosocial and sympathetic responses. Mothers were trained to rate their child's attachment security with the Attachment Q-Sort (Vaughn & Waters, 1990). Children who responded prosocially to their mothers' sadness and anger appeared to be more securely attached to their mother. Children who displayed sympathy to their mother were more securely attached, whereas upset, nonprosocial, defensive children were less securely attached. These results support the idea that early prosocial and sympathetic reactions to sadness and anger in an attachment figure, are associated with security of attachment to that figure, at least as rated by the attachment figure.

Lack of moral internalisation may be an important cause of antisocial and aggressive behaviour toward peers in middle childhood. Next, I review some studies on the association between attachment in infancy and aggressive behaviour in childhood.

INSECURE ATTACHMENT AND AGGRESSION IN CHILDHOOD

Insecure-avoidant children experience rejecting and intrusive parenting, and suppress feelings of anxiety in stressful situations to prevent further rejection by their parents. Their antisocial behaviour may model the parental behaviour to which they have been exposed for years. Renken, Egeland, Marvinney, Mangelsdorf, and Sroufe (1989) studied the early childhood antecedents of aggression and passive-withdrawal in 191 elementary schoolchildren from impoverished families considered to be at risk for caretaking problems. Teacher ratings of aggression were an outcome measure. Early childhood predictors represented three areas: (1) a developmental history of insecure attachment and poor adjustment; (2) inadequate or hostile parental care; and (3) chaotic or stressful life circumstances. Support was found for the prediction of aggressive behaviour problems for boys but not for girls. Insecure-avoidant attachment in infancy predicted aggression in boys, whereas maternal hostility predicted aggression in both sexes. Insecure-resistant attachment predicted passive-withdrawn behaviour problems in boys. The socioeconomic status of the families did not contribute additional predictive power.

The Minnesota preschool project (Sroufe, 1988) further examined the association between infant attachment and later compliance, empathy, and antisocial behaviour. I focus on specific aspects of this large, longitudinal project. Forty children (equal numbers of secure and insecure children) were selected from the sample of impoverished families described earlier (Renken et al., 1989) on the basis of infant attachment classification. Preschool teachers rated secure children as more competent with peers, and more empathic than insecure children (Sroufe, 1988). Peers ranked insecure children lower on sociometric measures than secure children. Participants with a history of secure attachment were not observed as victims or victimisers in preschool play, whereas children with an avoidant history were often victimisers. Insecure-avoidant and insecure-resistant children were more likely to be victimised than secure children (Sroufe, 1988; Troy & Sroufe, 1987). Kestenbaum, Farber, and Sroufe (1989) studied the empathic response to emotional distress in others of 24 preschoolers selected from the larger sample. Observers and teachers provided empathy ratings. Children with a history of insecure attachment showed less empathic distress than those securely attached to their mothers as infants. In particular, insecure-avoidant children were less empathic in preschool than the other children.

Observations of 28 children up in third grade were conducted, on three school days. Again, children with a secure history of attachment were significantly different from children with insecure histories in peer competence, including aggressive and affiliative behaviour towards peers

(Sroufe, 1988). Yet, as Lyons-Ruth (1996) noted, replication of the association between avoidant attachment and later aggression in "normal" middle class samples has proven difficult (Fagot & Kavanagh, 1990; Lewis, Feiring, McGuffog, & Jaskir, 1984). One exception is the Teti and Ablard (1989) sibling study, in which securely attached infants complied more readily with mothers' demands and were less aggressive than insecure children. Secure older siblings showed more empathy towards their infant sibling's distress than insecure children.

Disorganisation of attachment was not assessed in the first phase of the Minnesota project nor in most of the other relevant studies of nonclinical samples, so it is impossible to know whether it is insecure-avoidant attachment alone or in combination with disorganisation that leads to a lack of empathy and to elevated aggression in elementary schoolchildren. Disorganised attachment relationships constitute the most disturbed kind of attachment bonds in early childhood. Disorganisation refers to a temporary breakdown of secure or insecure attachment strategies, when the child is faced with two incompatible sources of fright: a stressful and threatening situation combined with a frightening adult who is the only attachment figure available to provide relief (Main & Hesse, 1990; Main & Solomon, 1990). Disorganised attachment is over-represented in abused children (Cicchetti, 1991; Cicchetti, Toth, & Lynch, 1995).

Several studies have documented the association between disorganisation in infancy and aggression in preschool. Lyons-Ruth, Alpern, and Repacholi (1993) examined the association between attachment at 18 months and child behaviour problems at age 5 years. Preschool teachers rated problems in a sample of 62 children from low-income families. Mother-infant interaction, maternal psychosocial problems, infant cognitive development, and infant attachment security (including the disorganised classification) were also assessed. Disorganised infant attachment was the strongest predictor of aggressive behaviour toward peers in preschool: 71% of aggressive preschoolers were classified as disorganised in infancy. Besides disorganised attachment, maternal psychosocial problems, particularly chronic depressive symptoms, were important predictors of aggression in preschool. Depression leads to hostile and intrusive maternal behaviour toward the child which, in turn, may influence attachment disorganisation and lead to a secondary, avoidant attachment strategy. In sum, deviant aggressive behaviour toward peers among children with disorganised attachments may be the result of disorganisation combined with an underlying insecure-avoidant attachment strategy (Lyons-Ruth, 1996).

In a longitudinal study of 100 low-income families, Shaw and Vondra (1995) did not find the predicted association between disorganised infant attachment and externalising toddler behaviour, although a combination of the stable insecure attachment classifications (including disorganisation)

were associated with externalising problem behaviours, in particular in boys. It was unclear whether the specific combination of disorganisation and avoidance was responsible for the link between attachment and externalising problem behaviours. The lack of an association may be due to the fact that the mothers completed the Child Behavior Checklist (Achenbach, 1985) to assess externalising problem behaviour in their own children. By these reports the low socioeconomic (SES) participants did not qualify as a clinical sample.

The controlling attachment pattern in preschoolers is equivalent to the disorganised pattern in infancy (Main & Solomon, 1990). Speltz, DeKlyen, Greenberg, and Dryden (1995) studied boys with a formally diagnosed oppositional defiant disorder (ODD) and comparison children. Attachment insecurity distinguished the 25 clinic-referred preschoolers from their 25 case-matched normal comparisons. Earlier reports revealed that insecure children, primarily of the controlling type, were over-represented in a mixed-sex clinic ODD group (Greenberg, Speltz, & DeKlyen, 1993; Speltz, Greenberg, & DeKlyen, 1990). In a replication study with disruptive clinic boys, the predominant attachment pattern was controlling or avoiding (Greenberg, Speltz, DeKlyen, & Endriga, 1991). DeKlyen (1996) described the difference between the attachment representations of mothers in the disruptive clinic group versus those in the comparison group: Insecure mothers were over-represented in the clinic group, and the majority of the insecure clinic mothers were classified as unresolved with respect to an important loss or other traumatic event. Thus, studies of disruptive and defiant preschoolers show that serious aggression and other behaviour problems are related to insecure (or unresolved) attachment in the mothers and insecure (or disorganised) attachment in their children. Children's aggressive behaviour may be a concomitant of intergenerational transmission of insecure attachment patterns. Associations between attachment disorganisation and children's aggression, however, may be limited to clearly defined, rather severe clinical cases (Lyons-Ruth, 1996).

ADOLESCENT ATTACHMENT, MORALITY, AND AUTHORITARIANISM

Aggression and a lack of empathy may become associated with deficiencies in moral reasoning later in life. Moral reasoning is heavily dependent on concern for the distress of others and on role-taking skills (Kohlberg & Diessner, 1991). Moral reasoning involves making judgements in situations of moral conflict. Kohlberg (1984) postulated an invariant sequence of three levels in the development of moral reasoning: preconventional, conventional, and postconventional. Each level is characterised by an increasing ability to balance the interests of all parties instead of focusing on

self-interests only. This balance may be conventional or universalistic (respectively type A or type B reasoning; Gibbs, Basinger, & Fuller, 1992). Although moral reasoning develops through an invariant sequence of stages, children need parents, teachers, and peers to help them move toward a mature level of reasoning (Boyes & Allen, 1993; Haan, Langer, & Kohlberg, 1976; Hoffman, & Saltzstein, 1967; Parikh, 1980; Powers, 1988). Kohlberg (1969) suggested that parents stimulate moral development by providing their children with role-taking opportunities.

I have argued that attachment may influence the type and level of moral reasoning (Van IJzendoorn & Zwart-Woudstra, 1995). First, parents with securely attached children are better teachers than parents with insecurely attached children. Studies on the role of attachment in cognitive development suggest that in secure dyads, parents are attuned to their children's needs and motivations, and create an emotional atmosphere in which children explore the limits of their abilities without anxiety about failing (Van IJzendoorn, Dijkstra, & Bus, 1995). Second, secure children have experienced role-taking as a vehicle for communication about emotions. Secure children learn that parents have their own lives and plans. In a "goal-directed partnership" (Bowlby, 1969), children learn to take their parents' wishes and goals into account to strike a balance between the justified emotional needs of partners in the attachment relationship. Insecure-ambivalent children emphasise their own goals, whereas insecure-avoidant children emphasise parental goals at the expense of their own (Van IJzendoorn & Zwart-Woudstra, 1995). Third, principled moral reasoning (type B) is relatively independent of existing conventions and group pressures. This type of reasoning might be displayed by those who are emotionally autonomous, those able to rely on attachment figures in times of stress, and also capable of being alone and disconnected from a group if necessary (Bowlby, 1969; Cassidy, 1988). They have developed a basic trust in significant others and in their own capacities. Their concept of self contains confidence in their own judgements and actions that seem to be a prerequisite for moral courage (Gibbs et al., 1992; Van IJzendoorn & Zwart-Woudstra, 1995). In this respect, autonomous persons may be less vulnerable to authoritarian pressures from superiors or peers.

Few studies have addressed the relation of attachment security with moral reasoning and related phenomena such as political reasoning and authoritarianism. In a sample of 47 University of California, Berkeley, college students, Van IJzendoorn and Zwart-Woudstra (1995) used the Sociomoral Reflection Measure-Short Form (Gibbs et al., 1992) to assess attachment and moral reasoning, and the Adult Attachment Interview (AAI; Main & Goldwyn, 1985-1993) to assess attachment representations. During the semi-structured AAI, subjects are asked to provide attachment-related memories from childhood, and to evaluate these memories from

their current perspective. Verbatim AAI transcripts are coded for the coherence with which the adult discusses these experiences and their effects (Main & Goldwyn, 1985–1993). Adolescents or adults classified as secure/autonomous describe attachment-related experiences consistently and collaboratively, whether experiences were difficult or positive. Dismissing adults tend to provide positive descriptors of childhood relationships to parents, but their transcripts are incoherent (inconsistent) in that they fail to provide supportive evidence with memories of specific incidents. Preoccupied adults tend to describe early relationships and experiences at length, but in a confusing and noncollaborative manner. Individuals cannot be classified when none of the above categories can be assigned, and indicators of unresolved status are absent. Unresolved status is identified from lapses in the monitoring of discourse that appears during the discussion of loss of important figures through death, sexual or physical abuse (Van IJzendoorn, 1995).

The level of moral reasoning in this group of college students varied from Stage 3 (seven students) to Stage 4 (one student), with most students reasoning at a transitional stage (for comparable data, see Mason & Gibbs, 1993). Thirty-two students (68%) showed moral type B reasoning; that is, they clearly balanced the interests of all parties involved. Although the overall score for sociomoral reflection was not associated with attachment representation, moral type B reasoning was prevalent in subjects with an autonomous attachment representation (Van IJzendoorn & Zwart-Woudstra, 1995). The absence of an association between moral stage and attachment representation may be due to the restricted range in the scores of these college students. In a diverse sample with a broader range of moral reasoning levels represented, the hypothesised association between overall moral stage and attachment representations may be found. The measures for moral ideality, type A and type B reasoning, did differ for autonomous and insecure subjects. The distinction between type A and type B concerns the presence or absence of prescriptive ideals. In type B thinking, ethical ideals are expressed, whereas in type A reasoning, social conventions or social arrangements are emphasised (Gibbs et al., 1992; Kohlberg, 1984).

The profile of adolescents with secure attachment representations reveals aspects of the personality of moral type B subjects. Secure or autonomous adolescents, for example, show (Main & Goldwyn, 1985–1993, p.103): “a balance with respect to the view taken of relationships, accepting their own part in relationship difficulties when appropriate, setting parents in relevant contexts when criticising them ... The reader has the impression of the development of a strong personal identity”. The current data support the hypothesis that moral type B reasoning may require an autonomous personality. Only individuals with a strong personal identity and a balanced perspective on their personal (attachment) history may have the ability to

internalise the ideals of mature morality and act accordingly. If they fail to live up to the ethical ideals, their self-definition may be at stake. In this respect, a secure attachment representation may help to bridge the gap between moral reasoning and moral action (Van IJzendoorn & Zwart-Woudstra, 1995).

In a similar vein, associations between attachment representations and an authoritarian view on moral and political dilemmas may be expected. The "authoritarian personality" (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950) is purportedly the outcome of a history of harsh and rejecting child-rearing experiences, and a specific family constellation of a weak father and a dominating, idealised mother. Authoritarianism involves a weak personal identity that is easily influenced by opinion leaders and peer groups. Authoritarianism also entails submission to powerful persons or groups, aggression toward weaker persons or groups, and a rigid adherence to conventions. Heteronomous morality is an important concomitant of authoritarianism (Hopf, Rieker, Sanden-Marcus, & Schmidt, 1995; Van IJzendoorn, 1990).

Hopf (1993) studied a group of 25 adolescents (mean age: 19 years old), selected from low SES and low educational backgrounds to enhance the incidence of extreme right-wing adherents. In this group, there were as many right-wingers as liberals. Only 20% of the participants were classified as secure-autonomous. The majority of the insecure adolescents were dismissing of their past attachment experiences and idealised their parents. The findings showed a strong association between attachment security and authoritarianism. The secure-autonomous participants were all classified as moderately authoritarian or not authoritarian at all, whereas the authoritarian individuals were all insecure. The dismissing, idealising adolescents articulated the most extreme authoritarian views. A series of case studies illustrated the mechanisms linking right-wing and authoritarian attitudes, and attachment experiences (Hopf et al., 1995). The small sample precludes generalisations but the evidence seems to disconfirm Altemeyer's (1988) contention that authoritarian attitudes develop independent of child-rearing experiences.

Independently from Hopf et al.'s (1995) study, a larger sample of college students confirmed the predicted association between attachment security and authoritarianism. The sample consisted of 140 University of California, Berkeley, undergraduate students (mean age 19.7 years) enrolled in an introductory psychology course in which students receive course credit for research participation. The sample is part of a larger study on concomitants of the AAI (Hesse & Van IJzendoorn, 1997). A total of 116 undergraduates completed the AAI and the Altemeyer (1988; Meloen, 1983) inventory for authoritarian attitudes. Dismissing participants scored highest on the authoritarianism scale ($M = 121$; $SD = 32.6$; $n = 30$), whereas the

secure-autonomous ($M = 104$; $SD = 30.5$; $n = 65$) and preoccupied students ($M = 98$; $SD = 30.0$; $n = 20$) could not be differentiated from each other [$F(2,112) = 4.01$, $P = .02$]. These results were independent of sex of participants and the five-way AAI classification including the Unresolved and Cannot Classify categories showed similar results. This is consistent with findings that dismissing subjects are most authoritarian (Hopf et al., 1995), and does not support the contention that authoritarian attitudes are unrelated to child-rearing experiences (Altemeyer, 1988). In view of the stability of attachment across the first 20 years of life (Hamilton, 1994; Waters, Merrick, Albersheim, & Treboux, 1995), it appears that authoritarianism may be partially rooted in early childhood attachment experiences and in subsequent attachment representations (Adorno et al., 1950).

In a treatise on attachment in private and public life, Marris (1996, p. 64) asserted that:

... what we grow up to feel about power and authority ... must be deeply affected by the attachment relationships which at least for the first fifteen or sixteen years of our lives, form the basis of all our experience of social control. Between a fifth and a quarter of a full human lifetime is spent in the care of parents, or their substitutes, on whom food, shelter, safety, love, all the chances of a future depend.

ADULT ATTACHMENT AND CRIMINAL BEHAVIOUR

Half a century ago John Bowlby, child psychiatrist and founder of attachment theory, published a paper entitled "Forty-four juvenile thieves: Their characters and home life" (Bowlby, 1944). In this study, Bowlby concluded that young petty thieves had developed an "affectionless" character as a result of accumulated childhood experiences of separations from attachment figures. These adolescents had lost their trust in parents and caregivers and, as a consequence, had developed a pervasive lack of empathy and compassion. Criminologists have criticised this pathbreaking study on attachment and criminality because of its retrospective nature and clinical case-study approach (Feldman, 1993). Self-reports of early childhood experiences may be distorted because of the reconstructive nature of autobiographical memory (Van IJzendoorn et al., 1997).

Recently, attachment researchers using the AAI (Main, Kaplan, & Cassidy, 1985) have returned to the study of the influence of past attachment experiences on adult behaviour and personality. The AAI has excellent psychometric properties and strong predictive validity, independent of differences in autobiographical memory for nonattachment related events. The AAI is not a retrospective measure and does not aim at the objective

description of past attachment experiences (Van IJzendoorn, 1995). The interview assesses the security of the current representation of attachment as indicated by the coherence of discourse about past and present attachment experiences. With this measure available, the conditions seem favourable to return to Bowlby's (1944) early interest in attachment disorders among criminal offenders.

Criminologists have speculated on the association between attachment experiences and criminal offences. According to Mawson (1980), serious interpersonal violence may be considered a fortuitous consequence of insecure attachment. Starting with the observation that many victim-offender relationships involve intimate friends, relatives or partners, he suggested that violent and homicidal behaviour is often an expression of the tendency to seek the proximity of familiar persons under conditions of stress, even when these persons are the source of stress. From this perspective, the victim's injuries are an unplanned consequence of the perpetrator's attempts to establish close contact when the attachment figure rejects the approach. This interpretation is similar to the Greenberg and Speltz (1988) model, in which conduct problems are considered strategies for gaining the attention or proximity of caregivers who otherwise remain unresponsive to the child's attachment signals.

The social control theory of delinquent behaviour (Hirschi, 1969) is less psychodynamical and more sociological. In this theory, criminal behaviour is the result of the weak bonds criminals have with social institutions and conventions. Delinquent behaviour is expected when individuals lack one or more strong ties to the social system: (1) commitment to conventional lines of action; (2) involvement in conventional activities; (3) the absence of beliefs that prevent crimes; and (4) attachments to parents, peers, and schools. Hirschi (1969) describes attachment as an affective relationship that facilitates the internalisation of norms. The use of survey methods to document the central factors in the model have precluded a rigorous test of these hypotheses because valid survey assessments of attachment are still lacking (DeHaas, Bakermans-Kranenburg, & Van IJzendoorn, 1994). Nevertheless, the available evidence indicates that a strong attachment to a spouse or partner protects against the development and continuation of criminal behaviour (Quinton & Rutter, 1984).

In line with these preliminary data and speculations, an exploratory study was conducted on young adults who had committed serious crimes such as murder and rape. Forty mentally disturbed male criminal offenders were involved. The research investigated the role of attachment representations and childhood attachment experiences in criminal behaviour and during treatment in a forensic psychiatric hospital (Van IJzendoorn et al., 1997). Patients were interviewed with the AAI, and with the Structured Interview for Disorders of Personality, Revised. The latter is a psychiatric diagnosis

based on Axis II of the Diagnostic and Statistical Manual which is restricted to personality disorders. Staff-patient interactions were rated by socio-therapists on the Dutch Forensic Staff-Patient Interactions Inventory. Court files provided information about patient child-rearing history and crime characteristics, in particular degree of violence.

Compared to the distribution of attachment security in a normal, low SES population, the percentage of secure offenders was minimal (5% vs. 39%, respectively). Compared to the distribution of attachment security in a clinical population, however, the distribution in the forensic sample did not show significantly less secure attachment representations (6% for the clinical, noncriminal population). As attachment security was not associated with the violence of the criminal offence, it was suggested that insecure attachment representations may be a mental health risk factor rather than a direct determinant of criminal behaviour. Consistent with Bowlby's (1944) assertions, the most insecure patients often came from broken homes and from institutional care. It should be noted that the proportion of criminals with disorganised attachment representations (unresolved or "cannot classify") was substantially higher than that in clinical groups (53% vs. 39%, respectively).

In a forensic mental hospital, the development of a therapeutic relationship between staff and patients may be compared to the development of an attachment relationship; the staff may provide a secure base from which patients explore their mental problems (Bowlby, 1988). The staff-patient relationship is also a sensitive gauge for progress in therapy; patients with abusive relationships in the forensic mental hospital are unlikely to develop healthy bonds in real-life circumstances (Van IJzendoorn et al., 1997). Patient attachment security was associated with interactive behaviour towards the staff. Insecure patients showed more abusive contacts with the staff than less insecure patients. Although attachment security was not linked to criminal behaviour *per se* in this sample of psychiatric in-patients who had committed serious crimes, this outcome suggests that the treatment of mentally disturbed criminal offenders may be promoted or hampered by the offenders' attachment representations.

A pilot study compared attachment representations and psychiatric diagnoses (DSM-III, Axis I and Axis II) of 22 criminals with a matched group of psychiatric controls (Fonagy et al., 1996; Fonagy & Target, 1995). The criminals had committed a diverse set of crimes, ranging from handling stolen goods and dealing with hard drugs, to multiple armed robbery, rape, and murder. Insecure attachment representations predominated in the criminal group. There were striking attachment differences between the prisoners who had committed crimes against property and those who had committed violent crimes (Fonagy et al., 1996). The latter group reported

more extremely disturbed attachment representations, that involved highly incoherent and contradictory accounts of attachment experiences unclassifiable in the traditional AAI coding system (Hesse, 1996). These individuals experienced a history of abuse and failed to demonstrate the (metacognitive) ability to reflect on and take into consideration the mental lives of others. The serious offenders interpreted mental phenomena in terms of physical, often bodily, terms. As a consequence, offensive ideas could be extinguished by deleting the physical object embodying these ideas (Fonagy & Target, 1995).

CONCLUSIONS: TOWARD A SOCIOEMOTIONAL MODEL OF ANTISOCIAL BEHAVIOUR

Early childhood attachment experiences may shape later antisocial behaviour only if attachment is a rather stable phenomenon. Whether the association between infant attachment insecurity and lack of compliance and empathy is relevant for later criminal behaviour depends on the stability of attachment and aggression. Despite some contrary evidence on the short-term stability of attachment (Belsky, Campbell, Cohn, & Moore, 1996), several longitudinal studies (Hamilton, 1994; Waters, Treboux, Crowell, Merrick, & Albersheim, 1995) indicated that attachment security in infancy was associated with attachment security in late adolescence and young adulthood. A middle class sample of 50 families demonstrated considerable stability of attachment across a 20-year period (70% of the cases remained stable) (Waters et al., 1995). In a smaller sample of 30 adolescents from mixed family backgrounds, Hamilton (1994) found 77% stability in attachment security across the first 17 years of life. It should be noted that in both studies, discontinuity of attachment could be attributed to major changes in living conditions or child-rearing arrangements.

Antisocial behaviour is also stable from the early years of life into adulthood. In a review of 16 longitudinal studies, Olweus (1979) found strong associations between early indicators of aggression and later criminality. Recent longitudinal studies confirmed this finding (Lynam, 1996; Sampson & Laub, 1990). A prospective longitudinal study of subjects who spent much of their childhood in institutionalised child-rearing settings and an inner-city comparison group found that about two-fifths of the children with conduct disorders revealed symptoms of antisocial personality disorder in early adult life, and about the same percentage had persistent social problems in several domains of personal functioning (Zoccolillo, Pickles, Quinton, & Rutter, 1992). Institutional caregiving apparently produces accumulated childhood separations from attachment figures and hinders the development of an emotional bond with a stable attachment figure.

Of course, many delinquents experienced favourable childhoods, and many children with conduct disorders are not criminals in adulthood (Lynam, 1996). Several contextual factors may determine why some people cross the border into criminality whereas other individuals with similar backgrounds refrain from delinquent behaviour. Stability of antisocial behaviour and attachment security from childhood to adulthood underscores the importance of longitudinal studies on attachment and on aggressive behaviour. Early attachment relationships may add explanatory power beyond concurrent life circumstances in interpreting variations in criminal behaviour (Spender & Scott, 1996).

Insecure attachment relationships are a risk factor in the development of serious antisocial behaviour. Disorganised attachments (sometimes in combination with insecure-avoidant attachments) are associated with elevated aggression in childhood (Lyons-Ruth et al., 1993) and with serious crimes in (young) adulthood (Fonagy et al., 1996; Van IJzendoorn et al., 1997). Disorganised attachments are a consequence of childhood experiences with abuse or loss of attachment figures (Main & Hesse, 1990; Van IJzendoorn, 1995), leading to a profound lack of trust in others and in the self. The role of physical abuse in the development of aggressive behaviour, mediated by social information-processing deficits (such as attributing hostile intent more readily), has been documented by Dodge, Bates, and Pettit (1990). The temperamental characteristic of fearlessness may hamper moral internalisation (Kochanska, 1995) and prepare the way for antisocial behaviour. Hyperactivity, impulsivity, and attention deficits all increase the likelihood of becoming a chronic offender (Lynam, 1996). Genetics may come into play through the role of temperament in the development of antisocial behaviour (Plomin, 1994). The combination of a lack of moral internalisation and a lack of confidence in self and others may lead to serious antisocial and criminal behaviour when a network of secure attachment relationships is not available to compensate for the absence of early rewarding attachment experiences (see Fig. 1).

The development of milder forms of antisocial behaviour may take another course. At the beginning of the developmental pathway toward mild antisocial behaviour, a hostile and rejecting, but not abusive, style of parenting may be found. Temperament may not play a crucial role here because sensitive caregiving compensates for temperamental difficulties (Sroufe, 1985), but temperament may strengthen the effects of insensitivity. Insensitive child-rearing may have at least two consequences. First, the child is continually exposed to a model of insensitive and hostile behaviour, whereas for many children parenting is their first and most impressive experience with altruistic behaviour (Emde, Johnson, & Easterbrooks, 1987; Spiecker, 1991). Second, hostile child-rearing may lead to an insecure attachment relationship, in particular an insecure-avoidant attachment

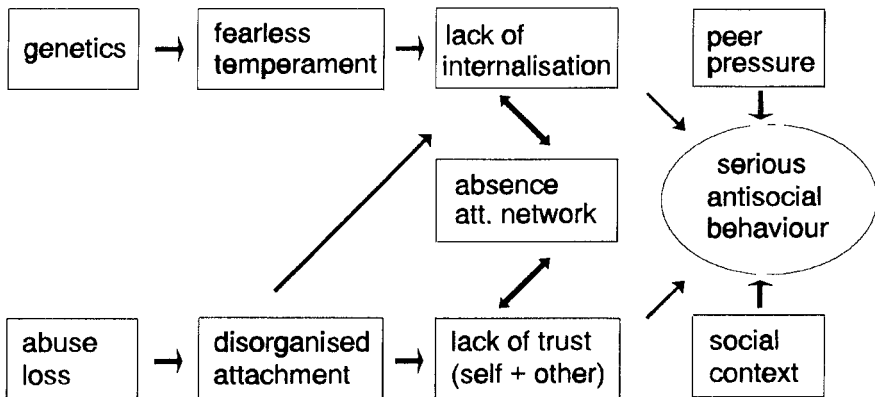


FIG. 1. Developmental antecedents of serious antisocial behaviour.

(Ainsworth, Blehar, Waters, & Wall, 1978), because the child will learn to avoid provoking parental rejection by showing negative emotions. Parental rejection is often focused on children's negative emotional expressions. Parents who model aggression hamper the regulation of negative emotions such as feelings of anger and frustration. Insecure children have only partially fulfilled their basic need for trust and confidence. They are inclined to monitor the attachment figure carefully, and to be absorbed by the unfulfilling attachment relationship. As a consequence, they are not able to develop genuine trust and empathic concern for others. Less confidence in self and others, combined with less optimal regulation of negative emotions, may lead to lower levels of moral reasoning and to mild forms of aggressive and antisocial behaviours (see Fig. 2).

The two models of antisocial behaviour assume that mild and serious antisocial behaviours are different classes of behaviour, with qualitatively different developmental dynamics. In this respect, the models incorporate the assumption of attachment theory that important aspects of human behaviour may be discontinuous and categorical. The differentiation of serious and mild antisocial behaviour parallels Moffitt's (1993) proposition of two different types of delinquency: life-course persistent and adolescent-limited antisocial behaviour. Even so, the models are hypothetical and heuristic. The most important function of the socioemotional model of antisocial behaviour is to remind us of Hirschi's (1969) speculation that insecure attachments are at the root of criminality. Kohlberg (1984) stresses the cognitive component of moral reasoning and moral behaviour. Using the concept of induction, Hoffman (1994) emphasises the cognitive instead of relational dimension of discipline. Grusec and Goodnow (1994a, b) point out that parental discipline should be accurately perceived by the child; they

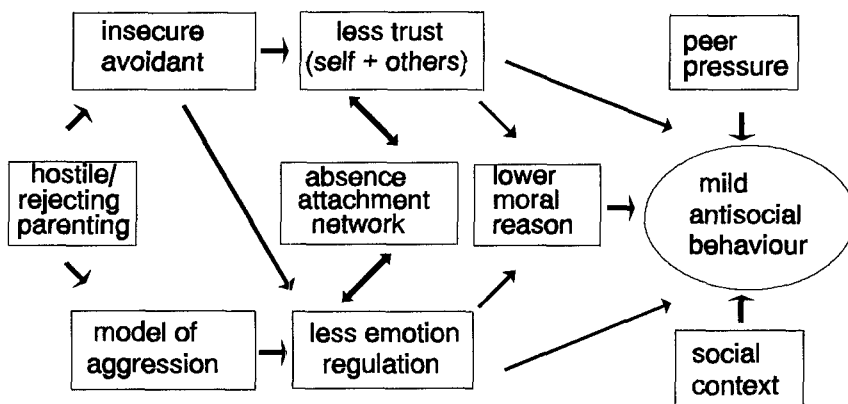


FIG. 2. Developmental antecedents of mild antisocial behaviour

argue that the acceptance or rejection of inductive restrictions of behaviour is crucial for the children's internalisation of parental values. Kochanska (1995) shows how temperamental fearfulness may interact with induction to stimulate moral internalisation. In this socioemotional model of antisocial behaviour these important insights are integrated into an attachment theory perspective that emphasises the evolutionary basis of both attachment and compliance. Following Hirschi (1969), Rawls (1971), and Feyerabend (1995), neither temperament, cognition, nor discipline can create moral beings, instead morality emerges from attachment experiences that lead to optimal regulation of negative emotions, as well as to the delicate emotional balance between self-confidence and a concern for others.

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